

**Abdul Arif Rusman Diharjo. Aplikasi pupuk organik terhadap kualitas dan kuantitas jagung manis (*Zea mays sachhrata* Sturt). Di bawah bimbingan Oktavia Sarhesti Padmini dan Sri Wuryani.**

### **ABSTRAK**

Jagung manis (*Zea mays sachhrata* Sturt) selain sebagai makanan untuk konsumsi sehari - hari juga digunakan sebagai bahan baku industri. Pernyataan ini dapat dilihat dari seringnya dijumpai produk bahan makanan dari bahan baku jagung manis, seperti: gula jagung, susu jagung, yogurt, dan sebagainya. Seharusnya perlu penanganan pasca panen yang baik agar jagung manis sebagai bahan baku produk makanan mempunyai kualitas yang baik. Salah satu upaya yang dilakukan adalah dengan cara memperbaiki sistem budidaya tanaman jagung manis, yaitu dengan cara pemupukan yang tepat. Tujuan penelitian ini adalah untuk menentukan pemberian pupuk organik yang terbaik terhadap hasil kualitas dan kuantitas jagung manis. Metode penelitian ini menggunakan Rancangan Acak Kelompok Lengkap (RAKL), dengan satu faktor yang terdiri atas 10 perlakuan, meliputi: P1= pupuk kimia dosis petani (urea: 300 kg/ha, TSP: 100 kg/ha, KCl: 100 kg/ha), P2 = pupuk kandang sapi 5 ton/ha + urea 30%, P3 = pupuk kandang kambing 5 ton/ha + urea 30%, P4 = pupuk kandang ayam 5 ton/ha + urea 30%, P5 = pupuk kandang sapi 5 ton/ha + POC plus, P6 = pupuk kandang sapi 5 ton/ha + POC bakteri, P7 = pupuk kandang kambing 5 ton/ha + POC plus, P8 = pupuk kandang kambing 5 ton/ha + POC bakteri, P9 = pupuk kandang ayam 5 ton/ha + POC plus, P10 = pupuk kandang ayam 5 ton/ha + POC bakteri. Parameter hasil yang diamati meliputi tinggitanaman, diameter batang, umur berbunga, panjang tongkol, diameter tongkol, jumlah baris biji, berat tongkol per sampel, berat tongkol per petak, kadar kemanisan, kadar air jagung, berat brangkasan. Data pengamatan dianalisis dalam sidik ragam dengan keragaman pada taraf  $\alpha = 5\%$ . Keragaman yang menunjukkan beda nyata diuji lebih lanjut dengan Uji Jarak Berganda Duncan atau *Duncan's Multiple Range Test* (DMRT) pada taraf  $\alpha = 5\%$ . Hasil penelitian menunjukkan bahwa aplikasi pupuk kandang ayam 5 ton/ha dan pupuk organik cair berpengaruh nyata terhadap tinggi tanaman umur 7 minggu setelah tanam (mst), berat tongkol per petak, dan kadar kemanisan setelah panen, 3 hari setelah panen (hsp). Sedangkan tidak berpengaruh nyata terhadap parameter diameter batang, umur berbunga, panjang tongkol, diameter tongkol, jumlah baris biji, berat tongkol per sampel, kadar air jagung, dan berat brangkasan.

Kata kunci : Pupuk kandang, pupuk organik cair, kualitas dan kuantitas jagung manis.

**Abdul Arif Rusman Diharjo. Application of organic fertilizer on the quality and quantity of sweet corn (*Zea mays sachhrata* Sturt). Under the guidance of Oktavia Sarhesti Padmini and Sri Wuryani.**

### ***ABSTRACT***

Sweet corn (*Zea mays sachhrata* Sturt) other than as food for daily consumption is also used as an industrial raw material. This statement can be seen from the frequent encountered food products from sweet corn feedstock, such as corn sugar, corn milk, yogurt, and other. Should have a good post-harvest handling that sweet corn as the raw material of food products have a good quality. One of the efforts is to improve the system of cultivation of sweet corn, that is by proper fertilization. The purpose of this study is to determine the best organic fertilizer to the results of the quality and quantity of sweet corn. This research method using Randomized Complete (RAKL), with one factor consisting of 10 treatments, including: P1 = dose of chemical fertilizers farmers (urea: 300 kg/ha, TSP: 100 kg/ha, KCl: 100 kg/ha), P2 = 5 tonnes of cow manure / ha + urea 30%, P3 = 5 tonnes of goat manure / ha + urea 30%, P4 = 5 tonnes of chicken manure / ha + 30% urea, P5 = 5 tonnes of cow manure / ha + LOF plus, P6 = 5 tonnes of cow manure / ha + LOF bacteria, P7 = 5 tonnes of goat manure / ha + LOF plus, P8 = 5 tonnes of goat manure / ha + LOF bacteria, P9 = 5 tonnes of chicken manure / ha + LOF plus, P10 = 5 tonnes of chicken manure / ha + LOF bacteria. Output parameters observed were plant height, stem diameter, days to flowering, cob length, cob diameter, number of seed rows, cob weight per sample, cob weight per plot, levels of sweetness, moisture corn, stover weight. Observational data in the analysis of variance with diversity at the level of  $\alpha = 5\%$ . Diversity indicates significant difference further tested by Duncan's Multiple Range Test or Duncan's Multiple Range Test (DMRT) at level  $\alpha = 5\%$ . The results showed that the application of chicken manure 5 ton/ha and liquid organic fertilizer bacteria significantly affect plant height age of 7 weeks after planting (wap), cob weight per plot, and levels of sweetness after harvest, 3 days after harvest (hsp). Where as no significant effect on the parameters stem diameter, days to flowering, cob length, cob diameter, number of lines of seeds, cob weight per sample, moisture corn and stover weight.

Keywords : Animal manure, liquid organic fertilizer, quality and quantity of sweet corn.